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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,650	05/14/2001	Robert Ulrich	001580-756	9450

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EXAMINER
MUHEBBULLAH, SAJEDA

ART UNIT	PAPER NUMBER
2174	

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/853,650	ULRICH ET AL.	
	Examiner	Art Unit	
	Sajeda Muhebbullah	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28,32,41,43 and 53-88* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *32,55 and 56* is/are allowed.

6)☒ Claim(s) *28,41,43,53,54,57-65,68-77 and 80-88* is/are rejected.

7)☒ Claim(s) *66,67,78 and 79* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to Amendment filed on 08/31/2006.

2. Claims 28, 32, 41, 43, and 53-88 are pending in this application. Claims 28, 32, 41, 43, 53, 55, 57, 68, 80, 83 and 86 are independent claims. Claims 80-88 have been added. This action is made Non-Final.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 28, 53-54, 57-58, 61-64, and 80-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderheiden (US 6,049,328) in view of Itoh et al. ("Itoh", US 5,890,116).

As per independent claim 28, Vanderheiden teaches a computer-readable medium having at least one data structure for use during execution of a program by a computer from which a sound effect can be produced encoded thereon, said data structure comprising:

a first sound segment for initiating said sound effect (col.7, lines 60-64);

a second sound segment which is repeatable to sustain said sound effect (col.7, lines 50-52); and

a third sound segment for decaying said sound effect (col.8, lines 2-6);

wherein said first sound segment, said second sound segment and said third sound

segment are associated with a transition between display states of a graphical user interface (col.5, lines 57-61; col.7, lines 59-67; col.8, lines 1-9).

However, Vanderheiden does not expressly teach wherein the at least one data structure includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure (Itoh, col.5, lines 11-20, 41-43). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Itoh's teaching with Vanderheiden's system in order to conserve memory space by storing a single sound file rather than multiple sound files.

As per independent claim 53, Vanderheiden teaches in a graphical user interface, a method for providing sound effects comprising the steps of:

displaying an object in a first display state, said first display state having no sound effect associated with it; (col.6, lines 18-20; col.9, lines 64-67, col.10, lines 1-2);

identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state (col.9, lines 35-52; Fig.7); and

varying an output characteristic of said sound effect (col.7, lines 65-67; col.8, lines 1-9).

However, Vanderheiden does not expressly teach using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of the identified sound effect to vary the output characteristic and reproducing said sound effect using said varied output characteristic. Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data

structure (Itoh, col.5, lines 11-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Itoh's teaching with Vanderheiden's system in order to conserve memory space by storing a single sound file rather than multiple sound files.

As per claim 54, Vanderheiden further teaches the method of claim 53, wherein said output characteristic is frequency (col.7, lines 65-67; col.8, lines 1-9).

As per independent claim 57, Vanderheiden teaches a method for providing a sound effect corresponding to movement of an object drawn on a graphical user interface of a computer system, the method comprising steps of:

drawing said object in a first display position of a display space controlled by said graphical user interface (Fig.5, *arrow 66*; col.7, lines 59-60);

receiving an indication of movement of said object, the movement being on said graphical user interface (Fig.5, *arrow 66*; col.7, lines 59-60); and

producing a plurality of sound segments (Fig.5, *sound segments 74, 76, 78, 80*) that are each associated with a transition between display states resulting from the object's movement on said graphical user interface (col.7, lines 59-67; col.8, lines 1-9).

However, Vanderheiden does not expressly teach using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure (Itoh, col.5, lines 11-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Itoh's teaching with

Vanderheiden's system in order to conserve memory space by storing a single sound file rather than multiple sound files.

As per claim 58, Vanderheiden teaches the method wherein at least one of the sound segments is repeatedly reproduced (Fig.5, *sound segment 74*).

As per claim 61, Vanderheiden teaches the method wherein repeatedly reproducing at least one of the sound segments comprises reproducing the least one of the sound segments at a volume specified for movement of said object (Fig.5, *audio track 72 at specified volume*).

As per claim 62, Vanderheiden teaches the method wherein repeatedly reproducing at least one of the sound segments comprises reproducing the least one of the sound segments at a pitch specified for movement of said object (col.8, lines 2-5).

As per claim 63, Vanderheiden teaches the method wherein repeatedly reproducing at least one of the sound segments comprises reproducing the least one of the sound segments after a delay specified for movement of said object (Fig.5, *delay between segments 76 and 80*).

As per claim 64, Vanderheiden teaches the method wherein producing the plurality of sound segments comprises:

producing an attack sound segment at the indication of movement (Fig.5, *segment 76*), and

repeatedly producing a sustain sound segment until an indication of termination of movement (Fig.5, *segment 80*); and

transitioning out of the sustain sound segment by producing a decay sound segment (Fig.5, *segment 78;* col.8, lines 1-5).

The limitations of claims 80-88 have been addressed in claim 28 and are therefore rejected under similar rationale.

5. Claims 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKiel, Jr. ("McKiel", US 5,374,924) in view of Itoh et al. ("Itoh", US 5,890,116).

As per independent claim 41, McKiel teaches a computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element (col.3, lines 43-46);

a graphical user interface for rendering an object on said display at a first display position (Fig.1);

a speaker for producing a sound effect associated with movement of said object (col.2, lines 30-36);

a storage device for storing said sound effect (Fig.2, *sound hardware 53*); and

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position (Fig.2, *CPU hardware 33*),

However, McKiel does not explicitly teach using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. Itoh teaches a system wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure (Itoh, col.5, lines 11-20). It would have been obvious to one of ordinary skill

in the art at the time of the invention to include Itoh's teaching with McKiel's system in order to conserve memory space by storing a single sound file rather than multiple sound files.

As per claim 43, McKiel teaches a computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element (col.3, lines 43-46);

a graphical user interface for rendering an object on said display at a first display position (Fig.1);

first and second speakers for producing a sound effect associated with movement of said object (col.2, lines 30-36);

a storage device for storing said sound effect (Fig.2, *sound hardware 53*);

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position (Fig.2, *CPU hardware 33*);

means for panning said sound effect between said first speaker and said second speaker in response to movement of the object (col.2, lines 30-36); and

means for varying a volume between said first speaker and said second speaker as compared to a recorded volume (col.3, lines 62-68).

However, McKiel does not explicitly teach using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. Itoh teaches a system wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining

to a data structure (Itoh, col.5, lines 11-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Itoh's teaching with McKiel's system in order to conserve memory space by storing a single sound file rather than multiple sound files.

6. Claims 59-60, 65, and 68-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderheiden (US 6,049,328) and Itoh et al. ("Itoh", US 5,890,116) in view of McKiel, Jr. ("McKiel", US 5,374,924).

As per claim 59, the method of Vanderheiden and Itoh teaches all of the limitations except for the step of panning at least one of the sound segments between speakers as said object moves. McKiel teaches an interface with sound effects in which speakers are used to demonstrate the effect of an objects movement (col.2, lines 30-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include McKiel's teaching with the method of Vanderheiden and Itoh in order to provide the user the ability to determine the object's location within the display.

As per claim 60, McKiel teaches the method wherein panning between speakers comprises varying a volume between said speakers as compared to a recorded volume (col.3, lines 62-68).

As per claim 65, McKiel teaches the method comprising selecting, from within a range of frequencies, a frequency for repeatedly reproducing said at least one sound segment (col.4, lines 8-20).

As per independent claim 68, Vanderheiden teaches a computer system with a display and a sound effect system said computer system comprising:

an input device for controlling movement of a cursor on said display (col.4, lines 35-37), wherein said input device generates a cursor output in response to said cursor being positioned over a control element (Fig.5);

a graphical user interface for rendering an object on said display at a first display position (col.4, lines 29-32);

a storage device for storing said sound effect (Fig.1, *memory 40*); and

the sound effect having a plurality of sound segments that are each associated with a transition between display states resulting from the object's movement on said graphical user interface (Fig.5, 72; col.7, lines 59-67; col.8, lines 1-9)

However, Vanderheiden fails to teach a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position and does not expressly teach using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. Itoh teaches a medium wherein an identified sound may be varied to produce different sound effects by varying one or more variable output parameters pertaining to a data structure (Itoh, col.5, lines 11-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Itoh's teaching with Vanderheiden's system in order to conserve memory space by storing a single sound file rather than multiple sound files. Furthermore, the system of Vanderheiden and Itoh fails to teach a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position. McKiel teaches an interface with sound effects in which speakers are used to demonstrate the effect of an objects movement (col.2, lines 30-36). It would have been obvious

to one of ordinary skill in the art at the time of the invention to include McKiel's teaching with the system of Vanderheiden and Itoh in order to provide the user the ability to determine the object's location within the display.

As per claim 69, McKiel teaches the system wherein said speaker is a first speaker, the system further comprising a second speaker for outputting said sound effect; and means for panning said sound effect between said first speaker and said second speaker in response to movement of the object (col.2, lines 30-36).

As per claim 70, McKiel teaches said means for panning to further comprise means for varying a volume between said first speaker and said second speaker as compared to a recorded volume (col.3, lines 62-68).

As per claim 71, Itoh teaches the system wherein a data structure associated with said sound effect includes a volume parameter specified for output of said sound effect (col.5, lines 41-43).

As per claim 72, Itoh teaches the system wherein a data structure associated with said sound effect includes a pitch parameter specified for output of said sound effect (col.5, lines 41-43).

As per claim 73, Itoh teaches the system wherein a data structure associated with said sound effect includes a volume gain parameter specified for output of said sound effect (col.5, lines 41-43).

As per claim 74, Vanderheiden teaches the system wherein a data structure associated with said sound effect includes an attack segment, a sustain segment, and a decay segment (Fig.5, *sound segments 76, 80, 78*).

As per claim 75, Vanderheiden teaches the system to further comprise means for retrieving, prior to retrieving said sustain sound segment, said attack sound segment; and wherein said attack sound segment is reproduced prior to repeatedly reproducing said sustain sound segment (Fig.5, *attack segment 76, sustain segment 80*).

As per claim 76, Vanderheiden teaches the system wherein said means for retrieving further comprises means for retrieving and reproducing, after said second display position is reached, said decay sound segment (col.8, lines 1-9).

As per claim 77, McKiel teaches the system to further comprise means for selecting, from within a range of frequencies, a frequency for repeatedly reproducing said sound effect (col.4, lines 8-20).

Response to Arguments

7. Applicant's arguments with respect to Amendment filed 8/31/2006 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

8. Claims 32 and 55-56 are allowed.

9. Claims 66-67 and 78-79 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Specifically, as per claims 66-67 and 78-79, the prior art fails to teach, in combination with the remaining elements:

the method wherein selecting a frequency comprises setting said range of frequencies to an envelope of about plus or minus 2.5 percent of an original frequency at which said at least one

sound segment was recorded, as well as the selection being weighted from within said envelope as cited in claims 66-67 and 78-79.

Although McKiel teaches a bounded frequency based on the movement of an onscreen object, the range of frequency is quite large, on the order of plus or minus sixty percent. While the range claimed, about 2.5 percent, is certainly within the range of the reference, to use the reference range in substitution for the claimed range would destroy the utility of the claimed invention.

Communications

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajeda Muhebbullah whose telephone number is **(571) 272-4065**. The examiner can normally be reached on Tuesday/Thursday and alt. Mondays from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (571) 272-4063.

The central fax number for the organization where correspondence for this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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